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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Telephone Number Portability	)	
	)	CC Docket No. 95-116
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	)	

BELLSOUTH COMMENTS

BELLSOUTH CORPORATION AND
BELLSOUTH TELECOMMUNICATIONS, INC.
By their Attorneys

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SUMMARY

In its *Third Report and Order* regarding Local Number Portability ("LNP") the Commission defined how carriers may recover their specific costs directly related to providing LNP services. The Commission established three categories of costs associated with the provision of LNP as Type 1, or shared costs, Type 2, or carrier-specific costs directly related to providing number portability, and Type 3, or carrier-specific costs not directly related to providing number portability. The Commission determined that, pursuant to statute, carriers could recover Type 1 and Type 2 costs. Type 3 costs, however, were viewed as an incidental consequence to providing LNP and therefore not recoverable. The Commission authorized carriers to recover their Type 1 and Type 2 costs directly related to LNP through a federal charge assessed to end-users.

In determining which costs are recoverable through the end-user charge, the Commission perceived that carriers could incur costs of which only a portion would be directly related to providing LNP, while the remaining portion would be related to the provision of other services, and therefore not recoverable. The Commission realized, however, that apportioning these joint costs fairly and reasonably between LNP and other services could be difficult and asked for comments proposing ways to apportion such costs.

While the *Third Report and Order* asked only for proposals for apportioning joint costs, BellSouth takes this opportunity not only to propose allocation methodology to apply to joint costs, but also to describe all identified direct costs it has incurred to provide LNP and that it may therefore recover through an end-user charge. Consistent with the *Third Report and Order*, BellSouth has set forth in these Comments all costs, including joint costs, it is entitled to recover through an end-user charge. These costs are either fully recoverable or joint costs of which LNP

comprises a portion of the total. For the latter, BellSouth presents an apportionment method, as requested by the Commission, that BellSouth believes should be used to identify fairly and reasonably the portion of the total cost to be recovered as a direct cost of LNP.

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BellSouth Corporation and BellSouth Telecommunications Inc. ("BellSouth") on behalf of its affiliated companies, hereby file these comments in response to the Commission's *Third Report and Order* in the above referenced docket.[1]

I. Introduction.

A. Review of Local Number Portability Docket: First Report & Order.

Pursuant to enactment of the Telecommunications Act of 1996,[2] the Commission released this docket to begin implementing number portability. In the *Third Report and Order* issued in this docket the Commission prescribed rules to govern how carriers could recover the costs associated with implementing a long-term method of local number portability ("LNP").

B. Background of the Commission's *Third Report & Order.*

The *Third Report and Order* defines how carriers may recover their specific costs directly related to providing LNP services. The Commission established three categories of costs associated with the provision of LNP: "(1) shared costs; (2) carrier-specific costs directly related to providing number portability; and, (3) carrier-specific costs not directly related to providing

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[1] In the Matter of Telephone Number Portability, CC Docket No. 95-116, *Third Report and Order*, FCC 98-82 (rel. May 12, 1998) ("*Third Report and Order*").

[2] Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996).

number portability."[3] The Commission determined that, pursuant to statute, telecommunications carriers could recover only those costs categorized as shared or specific costs directly related to providing LNP. The Commission viewed non-direct costs, however, as an incidental consequence to providing LNP and therefore not recoverable. Accordingly, the Commission authorized carriers to recover their costs directly related to LNP through a federal charge assessed to end-users.[4]

In determining which costs are recoverable through the end-user charge, the Commission perceived that carriers could incur costs of which only a portion would be directly related to providing LNP, while the remaining portion would be related to the provision of other services, and therefore not recoverable.[5] The Commission realized, however, that apportioning these joint costs fairly and reasonably between directly related and non-directly related categories could be difficult and asked for comments proposing ways to apportion such costs.

While the *Third Report and Order* asked only for proposals for apportioning joint costs, BellSouth takes this opportunity not only to propose allocation methodology to apply to joint costs, but also to describe all identified direct costs it has incurred to provide LNP and that it may therefore recover through an end-user charge. Accordingly, Section III. B., below, sets forth all the types of direct costs that, consistent with the *Third Report and Order*, BellSouth is entitled to recover through such an end-user charge. These costs are either fully recoverable or are joint costs of which LNP comprises a portion of the total.[6] For the latter, BellSouth presents an

[3] *Third Report and Order* ¶ 68.

[4] *Id.* ¶ 135.

[5] *Id.* ¶ 73. Those costs that have elements directly related to LNP and elements not directly related to LNP are referred to "joint costs" throughout these comments.

[6] *Id.* ¶ 73.

apportionment method, as requested by the Commission, that BellSouth believes should be used to identify fairly and reasonably the portion of the total cost to be recovered as a direct cost of LNP.

II. General Description of Study Methodology Proposed to Develop an End-User Charge for LNP Services.

A. Determination of End-User Charge for LNP Costs Recovery.

BellSouth is conducting a cost study ("LNP Cost Study") to determine a monthly end-user charge to recover its costs that are associated with the provision of LNP services. The LNP Cost Study will develop the direct, long run incremental costs of implementing LNP services. Costs identified for recovery consideration are those identified by the Commission in the *Third Report and Order*: 1) shared costs;[7] 2) costs directly related to LNP;[8] and, 3) costs not directly related to LNP.[9] BellSouth will not include any Type 3 costs in its study. The end-user charge determined pursuant to the LNP Cost Study will be filed with the Commission.

The LNP Cost Study: 1) assumes the cost of money is 11.25%, a rate established as reasonable in the *Third Report and Order*; 2) uses no general overhead loadings; 3) bases depreciation life on forward looking economic life; 4) uses actual capital and expense, as available, for years 1996 through 1998; 5) uses forecasted capital and expense for years 1999 through 2000; 6) assumes that costs are to be recovered over a five year period; and 7) includes

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[7] Shared costs are also referred to as "Type 1" costs. Both terms are used interchangeably throughout these comments.

[8] Costs directly related to LNP are also referred to as "Type 2" costs or "direct" costs. All of these terms are used interchangeably throughout these comments. Section III, below, provides a full discussion of Type 1 and Type 2 costs.

[9] Costs not directly related to LNP are also referred to as "Type 3" costs. Both terms are used interchangeably throughout these comments.

clearly identifiable advancement costs, *i.e.*, costs incurred to implement projects sooner than scheduled because of LNP requirements.

The costs are categorized as recurring or nonrecurring. Recurring costs are the annual costs resulting from capital investments necessary to provide LNP services assuming a forward-looking view of technology and deployment. Recurring costs are determined by multiplying the investments by annual cost factors[10] and dividing by 12 months. The result is further divided by forecasted network access lines to achieve a monthly per unit cost.

Nonrecurring costs arise from program development work and other work efforts associated with the implementation of the service. These labor costs are determined by multiplying the labor work times by the directly assigned labor rates. Unit costs are determined by dividing the result by the forecasted network access lines for the service. Nonrecurring costs also include expenses paid to switch vendors for the right to use switch software.

BellSouth is identifying the actual and projected incremental costs for LNP using unique plan identification codes.[11] The costs provided in Section III., below, are the types of costs identified to be included in the LNP Cost Study.

B. Costs Not Included in Cost Recovery: Costs of Providing Query Services to Other Carriers.

In addition to implementing LNP services for its own use, BellSouth is also developing a Local Number Portability Query Service ("LNP Query Service") and Local Number Portability Call Routing ("Default Query") Service for other carriers. The Local Number Portability Query

[10] Annual costs factors are based on capital and operating costs. Capital costs include depreciation, cost of money and income tax. Operating costs consist of plant specific expenses, other expenses, and *ad valorem* and other taxes.

[11] All available actual costs are being used in the LNP Cost Study.

Service applies to wireline and wireless telecommunications carriers with a LNP capable switch that makes queries to the BellSouth number portability data base.[12] BellSouth will assess carriers subscribing to the BellSouth LNP Query Service a charge for each query to this data base.

The Local Number Portability Call Routing ("Default Query") Service applies to wireless and wireline telecommunication carriers that terminate traffic into BellSouth's network without the correct Location Routing Number ("LRN") routing information. This traffic can terminate at an end office or at a tandem switch. In either case, the end office or tandem switch will suspend call processing and launch a query to the BellSouth LNP data base when the necessary query has not been performed by the carrier terminating the call to BellSouth.[13] When the routing information is returned to the switch, call processing resumes and routes the call to the correct switch to reach the called party. BellSouth initiates this query on behalf of the N-1 carrier.

BellSouth recognizes that the costs of providing the above query services cannot be recovered through the end-user LNP charge authorized by the *Third Report and Order*. Accordingly, because the query services use some of the same network and Operations Support Systems ("OSS") developed or adapted to provide LNP services, BellSouth developed a cost study to specifically define the costs associated with query services and has separated those costs from the costs BellSouth expects to recover through the LNP end-user charge. BellSouth will file a separate tariff for query services that it will provide to other carriers.

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[12] The N-1 carrier is the carrier in the call routing process immediately preceding the terminating carrier.

[13] *Id.*

III. Categorization of Costs Related to Providing LNP.

As stated previously, the *Third Report and Order* established three categories of costs associated with the provision of LNP. In this section BellSouth describes the categories of Type 1 and Type 2 costs it intends to recover through the end-user charge permitted by the *Third Report and Order*.

A. Shared Costs

Shared costs are the costs incurred by the industry to build, operate, and maintain the data bases needed to provide number portability. The data bases are constructed and maintained by a third party administrator. The *Third Report and Order* requires each telecommunications carrier to pay its allocated share of the data base administrator's costs. The Commission based a carrier's allocated share of these Type 1 costs on that carrier's total intrastate, interstate, and international end-user telecommunications revenue. Once a carrier's share of the Type 1 costs is defined, that share becomes a carrier-specific cost directly related to the provisioning of LNP services, *i.e.*, Type 2 costs. Accordingly, BellSouth will include all allocated shared costs in its direct costs to be recovered through a monthly end-user charge.

B. Carrier-Specific Costs Directly Related to Providing LNP.

Direct costs are the costs carriers incur specifically to provide LNP services.[14] These costs may be fully recovered by the carrier through a federal charge assessed to end-users.[15] As discussed above, a carrier may also incur joint costs related to LNP services. The carrier may recover only that portion of the joint costs that are directly related to LNP services.

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[14] *Third Report and Order* ¶ 72.

[15] *Id.* ¶ 135.

BellSouth has incurred, and continues to incur, significant costs to provide LNP services. Most of these costs are directly related to LNP and thus may be recovered either through end-user or query service charges. In this subsection, BellSouth describes its direct costs of providing LNP services, and has categorized them as: 1) network costs; 2) OSS costs; and, 3) employee related and other costs.

1. Network Costs

a). Fully Recoverable Network-Hardware Costs Directly Related to Providing LNP Services.

The provision of LNP services required BellSouth to acquire new hardware for its network. Additionally, much of its existing network hardware had to be adapted to meet the demands of LNP. The following describes the hardware BellSouth acquired or modified to provide LNP services. All of the costs associated with these acquisitions or modifications are directly related to LNP and, as Type 2 costs, are fully recoverable.

(1) New SCP Pairs.

BellSouth acquired additional Service Control Points ("SCPs") specifically for the purpose of providing LNP services ("LNP SCPs"). These LNP SCPs house the LNP data base, which contains routing information for ported numbers. A LNP SCP receives the called number in a query from a Service Switching Point ("SSP"), and responds with routing instructions that enable the SSP to complete the call. The query and the resulting routing instructions travel over the Common Channel Signaling Network ("CCSN" or "SS7" Network). In addition to the cost of the SCPs, BellSouth also incurred costs for vendor support to resolve any LNP related problems encountered in the embedded SCPs. Moreover, BellSouth incurred costs for data

communications equipment and labor required to install X.25 circuits linking SCPs with the Service Management System ("SMS") and with network monitoring systems.

(2) SCP Feature Augmentation.

To provide LNP service, BellSouth had to augment the LNP SCPs in order to transfer to the LNP SCPs several functions that are normally performed by the Signal Transfer Points ("STPs"). To perform these functions in the LNP SCPs, BellSouth had to add Global Title Translation ("GTT"), and SS7 Subsystem Management ("SSM") to the LNP SCP.

GTT is the process by which a STP (and now a LNP SCP) determines where to route certain SS7 Transactional Capabilities Application Part ("TCAP") messages. These messages invoke Custom Local Area Signaling Services ("CLASS") features, *e.g.*, Call Return, or contain the Line Information Data Base ("LIDB") or Calling Name ("CNAM") queries, or turn on Message Waiting Indicators, *e.g.*, InterSwitch Voice Messaging ("ISVM").

SSM allows the LNP SCPs to be aware of the status (in- or out-of-service) of switches and data bases. If the destination switch or data base is out of service, the SSM allows the LNP SCPs to reject TCAP messages destined for that switch or data base, instead of forwarding the messages across the SS7 network to the out-of-service switch or data base.

(3) STP-to-SCP Signaling Links.

The CCSN provides out of band signaling connectivity between LNP end offices ("SSPs") and the LNP SCPs for query/response processing. BellSouth installed additional CCSN links in order to connect the LNP SCPs to the CCSN.

(4) Digital Loop Carrier ("DLC") Overlay for 1AESS.

BellSouth purchased DLC equipment to implement DLC overlay for 1AESS switches that are at risk for number group ("NG") exhaust due to LNP port-in activity. DLC overlay

enables BellSouth to serve ported-in customers from a non-home wire center digital switch in lieu of a 1AESS that is at risk for NG exhaust.

b). Fully Recoverable Network-Software Costs Directly Related to Providing LNP Services.

(1) LNP Feature Software - Access/Local Tandem Switches.

BellSouth installed software that provides LNP trigger detection and processing capability in tandem switches for calls to portable NXXs not previously queried by an originating switch or N-1 network. This software includes the following functionalities: (a) identification of portable NXXs requiring LNP data base query; (b) LNP data base query and response capability for calls to portable NXXs; (c) call routing via LRN, including populating the Generic Address Parameter ("GAP") with dialed Directory Number ("DN"), Called Party Number ("CPN") parameter with an LRN, and Forward Call Indicator ("FCI") query status in the Integrated Services Digital Network User Parts ("ISUP") Initial Address Message; (d) default routing via dialed DN when no response to a data base query is provided due to abnormal circumstances; and (e) recording of LNP 720 module in AMA records.

(2) LNP Feature Software - Traffic Operator Position System ("TOPS") Tandem Switches.

BellSouth installed software that provides LNP trigger detection and processing capability in the TOPS tandem switch for operator traffic to portable NXXs. This software includes the same functionality as the Access/Local Tandem Switch software listed in (1) (a) – (e) above.

(3) LNP Feature Software - End Office Switches.

BellSouth installed software that provides LNP trigger detection and processing capability in end office switches, including both originating and terminating query types. This

software includes the same functionality as the Access/Local Tandem Switch software listed in (1) (a) – (e) above, and also includes (f) processing of GAP and LRN information for terminating calls to ported in DNs, and (g) Ten (10) Digit Unconditional Trigger functions.

(4) Switch Generic Software Upgrades - 1AESS, 4ESS.

The provision of LNP services required BellSouth to perform upgrades to certain switches. The upgrades included base operating system software for the 1AESS type switch and base operating system software for 4ESS tandem switch. These upgrades are required as a prerequisite for introduction of the LNP feature software and were performed solely for the purpose of providing LNP services. Therefore such upgrades are fully recoverable direct costs.

(5) Duplicate NXX Across Multiple Numbering Plan Areas ("NPAs") Feature Software.

BellSouth installed software that provides the capability to open an identical NXX across multiple NPAs in the same end office switch. This capability is required to port CLEC DNs into BellSouth switches in areas that have implemented an NPA overlay.

c). Network-Hardware and Software Joint Costs Related to the Provision of LNP Joint Costs.

BellSouth incurred hardware and software costs that were only partially related to the provision of LNP services, i.e., joint costs. Pursuant to the *Third Report and Order*, the following is a description of the events or acquisitions associated with these joint costs and the cost apportionment method BellSouth proposes to use to allocate the appropriate amount of the costs to LNP services.

(1) Switch Hardware - AMA Upgrades.

BellSouth increased its Automatic Message Accounting ("AMA") disk drive capacity in order to accommodate LNP 720 AMA module recording. BellSouth proposes to allocate a share

of these costs to LNP based on the average percentage increase in AMA record size attributable to LNP.

(2) Switch Hardware - Processor Upgrades.

BellSouth increased the overall call processing capacity of several types of its switches. These upgrades were required to process BellSouth's query/response traffic associated with LNP data base lookups to obtain call routing information for calls to portable NXXs. Processor upgrades were required in the 5ESS, DMS-100, and DMS-200 switch types. BellSouth proposes to allocate a portion of these joint costs to LNP based on the percent of processor utilization attributable to BellSouth's LNP query/response traffic. These upgrades were advanced in order to accommodate the provision of LNP services. Accordingly, BellSouth proposes to treat the cost of money for advancing the upgrades as direct costs. No other portion of the upgrade costs was allocated to LNP services.

(3) Hardware - STP-to-SSP Signaling Links.

BellSouth installed additional CCSN links required between SSPs and STPs to process out-of-band signaling associated with BellSouth's LNP data base query/response traffic. BellSouth proposes to allocate a portion of these joint costs to LNP based on the average percent link utilization attributable to LNP.

(4) Feature Software - 5ESS Operations, Administration & Maintenance ("OA&M").

BellSouth purchased software that provided a feature to expand the number of Subsystem Numbers ("SSNs") that can be assigned in the 5ESS switch. SSNs are used in TCAP messaging to identify the type of TCAP message being sent over SS7 network. The initial Standards developed in the T1S1.3 Standards of the Alliance for Telecommunication Industry Solutions

("ATIS") allowed SSNs to fall within a certain range, but the switch software only supported a sub-set of the total range.[16] The use of SSNs in BellSouth has increased over time to include new CLASS services, new AIN services, and LNP. LNP, however, triggered the immediate need to expand the SSN capability in the 5ESS switch. BellSouth proposes to allocate a portion of joint costs to LNP as a percentage of the number of SSNs forecasted to be used through year 2004.

(5) Switch Generic Software Upgrades – 5ESS, DMS 100, and DMS 200.

BellSouth upgraded base operating system software for its 5ESS, DMS-100, and DMS-200 type switches. These upgrades were advanced in order to accommodate the provision of LNP services. Accordingly, BellSouth proposes to treat the cost of money for advancing the upgrades as direct costs. No other portion of the upgrade costs was allocated to LNP services.

2. OSS Costs.

a). OSS Costs of Which 100% Are Directly Related to Providing LNP.

BellSouth had to acquire and develop new OSS in order to provide LNP services. Additionally, much of the existing OSS had to be adapted to support provision of LNP services. Attachment 1 contains a table of all of the newly developed and adapted OSS that describes each newly developed system and the changes made to existing systems in order to accommodate the provision of LNP services. Because all of the costs associated with these OSS are directly related to LNP, BellSouth proposes to classify them as Type 2 costs.

[16] The range of SSNs is assigned and managed through T1S1.3 Standards.

b). OSS Costs of Which a Portion Are Attributable to the Provision of LNP Joint Costs.

In addition to the OSS that were developed or adapted specifically for the provision of LNP services, BellSouth incurred costs for OSS only partially attributable to the provision of LNP services. Following is a description of the joint costs associated with the changes made to the OSS and the cost apportionment method used to allocate the appropriate amount to LNP services.

(1) Vendor Provided OSS.

(a) Facility Assignment and Control System ("FACS").

FACS is a multi-component system designed to automatically process the assignment of service orders. It primarily utilizes four major applications: (1) Service Order Analysis & Control ("SOAC");[17] (2) Loop Facilities Assignment and Control System ("LFACS");[18] (3) Provisioning Analyst WorkStation ("PAWS");[19] and (4) Hands-off Assignment Logic ("HAL").[20]

The AFIG depends on FACS to support installation activities and central office facilities changes. BellSouth's Maintenance Centers use FACS when processing customer trouble reports that require changes in outside plant facilities. Additionally, the Facilities Assignment Specialist uses FACS to prepare and process Engineering Work Orders.

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[17] SOAC administers and controls the service order flow to obtain the assignment of central office facilities. SOAC also interacts with the Computer System for Mainframe Operations ("COSMOS").

[18] LFACS maintains inventory of loop plant facilities.

[19] PAWS assists in managing the Requests for Manual Assistance ("RMA") workload in the Address & Facility Inventory Group ("AFIG") Center.

[20] HAL mechanically handles RMAs for the AFIG Centers through terminal emulation software.

FACS system capacity projections for the BellSouth region indicated the need for capacity additions, a portion of which is related to LNP. BellSouth purchased two (2) UNISYS 2200/3800 3X-processor mainframes (196 MIPS) in order to meet capacity estimates and to avoid degraded operations.

A portion of the capital costs for these processors is directly related to the provision of LNP. BellSouth proposes to allocate to LNP a share of these costs based on a percentage calculated as follows. Based on Bellcore's estimate, BellSouth would determine total capacity increase needed region-wide for LNP. BellSouth would then divide the needed increased capacity by the total capacity available in the two new processors.

(b) Bellcore Service Order Planning Work Statement.

Bellcore will provide transition consultation, planning and site-support for FACS and the interfaces from its SOAC module, including support for site planning, testing cut-live and on-going problem analysis/resolution. The expenses associated with this project include travel & living expenses for Bellcore's consultant to travel to visit BellSouth sites. BellSouth proposes to allocate to LNP a share of these costs based on a percentage calculated by dividing the total number of days the consultant's time is estimated to be used for LNP by the total number of business days the consultant is available.

(c) Mechanized Loop Testing ("MLT").

MLT provides the means for testing plain old telephone service ("POTS"). It is used for identifying and correcting loop problems in response to customer trouble reports. It is also utilized for testing lines to prevent service problems to customers. MLT formerly ran on the

VAX8650 processors. These processors were replaced with HP9000s to accommodate new LNP feature software because LNP software was not compatible with the VAX8650 processors.

A portion of the capital costs for this processor is directly related to the provision of LNP.[21] BellSouth proposes to allocate to LNP a share of these costs based on a percentage calculated by dividing the number of MLT testable lines in the region by the projected number of ported lines per year. The purchase of these processors were advanced in order to accommodate the provision of LNP. Additionally, BellSouth proposes to treat the cost of advancement for purchasing the new processors as Type 2 costs.

(d) Mechanized Translations System ("MTS")/with Automated Processing of Recent Change Input Letters ("APRIL") ("MTS/APRIL").

MTS/APRIL is a file server that stores the translations routing and billing forms/tables for the 1AESS, 5ESS, and DMS-100/200/TOPS offices in a software format. When an Electronic Technician ("ET") makes changes to the forms and tables on a pending basis, MTS creates the Recent Change ("RC") messages to send to the switch. APRIL delivers the changes and keeps a status, which it reports to the ET, allowing the ET to do other tasks while the changes are being made. MTS/APRIL is also used by the Network Infrastructure Support Center ("NISC") to enter the complex routing and billing translation changes to the central office switches.

BellSouth replaced two existing MTS file servers with two new file servers due to memory exhaust, processor overload problems, and increased activity caused by LNP. A portion

[21] BellSouth also has direct, non-joint, costs associated with this OSS. Accordingly, this system is also listed in Attachment 1.

of the capital costs for these servers is directly related to the provision of LNP.[22] BellSouth proposes to allocate to LNP a share of these costs based on a percentage calculated by dividing the total number of LNP forms currently in MTS by the total number of forms in MTS.

(e) Network Traffic Management Operational System ("NTMOS").

NTMOS collects, analyzes and patterns real-time network congestion and enables managers to control live traffic in the network to efficiently utilize network resources. BellSouth purchased features 129, 187, and 218 for NTMOS. Features 129 and 187 are prerequisites to feature 218. Feature 218 provides 5-minute total office measurements specific to LNP. These measurements provide a view of the load LNP places on the signaling network and tracks provisioning problems associated with LNP. BellSouth proposes to allocate to LNP a share of these costs based on a percentage calculated by dividing the estimated number of calls associated with LNP by the estimated total number of calls.

(f) Signal Traffic Management ("STM").

STM collects real-time CCS7 traffic data from the STPs and SCPs and displays data to the Network Management Center ("NMC"). BellSouth replaced current Signaling Engineering Administration System ("SEAS") with the STM so that real-time information can be obtained. This required the purchase of HP-9000 processors for the STM platform and STM feature software to collect network element generated data, to alert the user to on-occurrence alarms, exceptions, and to provide for detailed displays and reporting of data.

[22] BellSouth also has direct, non-joint, costs associated with this OSS. Accordingly, this system is also listed in Attachment 1.

BellSouth proposes to allocate to LNP a share of both the capital and expenses associated with application based on a percentage calculated by dividing the projected LNP data flow divided by the total projected data flow.

(g) Traffic Data Management System ("TDMS").

TDMS polls and collects traffic data from the Class 5 end offices throughout the BellSouth region. The DMS 100/200 interface was changed to increase traffic data buffer size. TDMS was also modified to detect the difference in format of the initial structure sent by the DMS-100/200 and decide whether to process the data as an old or new style interface. This feature provided the ability to collect data for the requirements estimated for LNP.

A portion of the costs for this modification to TDMS is directly related to the provision of LNP. BellSouth proposes to allocate a portion of joint costs to LNP based on an estimate of the data buffer expansion needed to accommodate LNP.

(h) Total Network Management ("TNM").

TNM provides surveillance and analysis of all BellSouth switch network elements including 1650 local and toll switches, all SS7 STPs, and all Voice Mail switches. BellSouth's regional centers utilize TNM to maintain the switching and message trunking network. BellSouth enhanced TNM to provide the capabilities required to continue to support changes in the switching network. Accordingly, a portion of the costs for the enhancements to TNM is directly related to the provision of LNP. BellSouth proposes to allocate a portion of joint costs to LNP based on an estimate of the increased network load that LNP will cause through increased data traffic in TNM.

(i) K2 Upgrade.

K2 is a PC LAN-based work management application used in the Recent Change Memory Administration Group ("RCMAG"). It collects non-flow-through service orders, change messages and switch rejects from the MARCH application. K2 automatically resolves certain switch rejects and prioritizes the remainder of the manual work for presentation to the user. K2 will also pull POTS trouble tickets and prioritize work for presentation to the user. In addition, K2 has a Random Observation Module that is a management tool to evaluate employee performance.

Because the manufacturer has discontinued the existing K2 platform, it cannot be enhanced or changed. BellSouth purchased K2 6.X, the replacement product for K2, to provide the platform for LNP. The new architecture will also accommodate the Universal Service Order Code ("USOC") and transaction volume growth that is anticipated with LNP.

A portion of the costs for the purchase of K2 6.X is directly related to the provision of LNP. BellSouth proposes to allocate to LNP a portion of joint costs based on a percentage calculated by dividing the projected LNP non-flow-through service order volume by the total projected non-flow-through service order volume.

(j) PREDICTOR.

PREDICTOR provides switch and test data for POTS numbers and maintains an assorted customer record data base.[23] PREDICTOR provides access to the central office to allow performance of feature verifications on customer reported troubles.

[23] This data base is separate from Loop Maintenance Operations System ("LMOS") which associates facility information with an Automatic Line Insulation Test ("ALIT") tested customer telephone number.

BellSouth acquired a new platform to support LNP feature changes because the existing processor could not support the new demands placed on it by the new generic. Additionally software changes were required to accommodate the LNP requirements.[24] BellSouth proposes to allocate to LNP a share of these costs based on a percentage calculated by dividing the number of Predictor ALIT Testable Lines by the projected number of ported lines per year.

(2) Internal OSS

(a) Advanced Routing and Trunking System ("ARTS").

ARTS is used by the state circuit capacity management ("CCM") routing staffs to provide routing instructions to the state NISC for translation purposes. BellSouth has replaced the Mechanized Routing System ("MRS") with ARTS. because the MRS could not reflect the NPA NXX codes targeted for porting and the incoming screening instructions at BellSouth local tandems where CLECs will interconnect. ARTS calculates primary and alternate routing for all NPA NXXs. BellSouth also had to add an interface to the Bellcore TIRKS® system to keep trunk inventory correct between ARTS and TIRKS.

BellSouth modifications to ARTS resulted in costs directly related to the provision of LNP. BellSouth proposes to allocate to LNP a percentage of these costs based on the LNP offices and NPA NXXs using ARTS. Moreover, BellSouth had to buy new personal computers ("PCs") and a new server for the CCM routing staff in the NISC in order to support the modified ARTS. BellSouth proposes to allocate to LNP a percentage of the computer costs by first assigning a percentage of the costs to ARTS based on the amount of the new computers usage

[24] BellSouth also has direct, non-joint, costs associated with this OSS. Accordingly, this system is also listed in Attachment 1.